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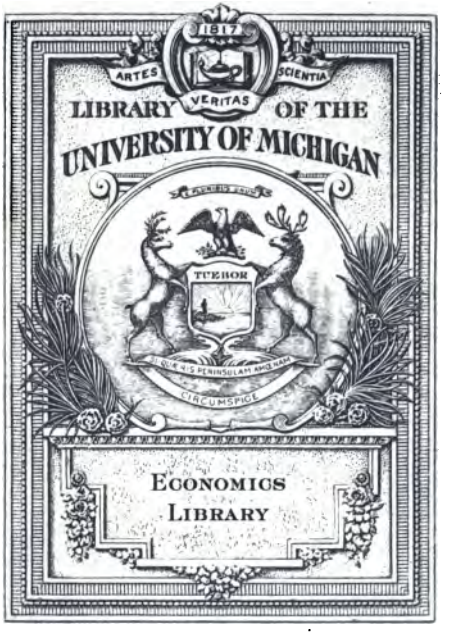
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CONFERENCE

ON THE

CONSERVATION OF NATURAL RESOURCES

WHITE HOUSE

WASHINGTON

MAY 13–15, 1908

THE NATURAL WEALTH OF THE LAND AND ITS CONSERVATION

JAMES J. HILL

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BY

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In some respects the occasion that calls together this assemblage is unprecedented. The dignity and public influence of those present as guests and advisors mark its importance. It is in effect a directors' meeting of the great political and economic corporation known as the United States of America. The stockholders are the 87,000,000 people of this country; the directors are the state and federal officers, whose position brings them in touch with the operation of the whole country. We should not fail to recognize the high note that has been struck and the immensity of the interests involved upon the lives of millions yet to be.

The two-fold significance of this meeting is found in the comparative novelty of its subject matter and of the method by which it has been approached. The subject is the conservation of our national wealth, and a careful study of our national economic resources.

Two years ago, in an address delivered before the meeting of the Minnesota State Agricultural Society, at St. Paul, I reviewed the practical consequences and the statistical proof of that national wasteful-

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ness which competent scientific authority had already set down as distinguishing the American people. From data of the highest certainty, no one of which has ever since been called in question, I then forecast some of the conditions certain to arise within the next half century, when the population of this country will have grown to more than 200,000,000. The facts were pointed out not in the spirit of the alarmist, but in order that attention might be directed to the way by which the nation may escape future disaster. So rapidly do events move in our time, so swiftly do ideas spread and grasp the public mind, that some policy directed to the ends then set forth has already become a national care. It is this policy—the conservation of national resources, the best means of putting an end to the waste of the sources of wealth—which largely forms the subject matter of this Conference. For the first time there is a formal national protest, under seal of the highest authority, against economic waste.

The method by which this end is to be reached is scarcely less interesting or significant. This body has no legal status and its conclusions will not be of binding effect upon the nation, the state or the individual. Yet they will carry a weight greater than legislatures can impart, a force that even courts could not strengthen, because they will not be subject to repeal. They will represent a truly national opinion expressed with fidelity to our national constitutional form. The people of the United States are

represented here through the several states. May we not hope that from this gathering there may be born not only a wiser system of using the still remaining resources of this country, but a cooperation between nation and state that shall be as helpful in our political as these deliberations ought to be in our economic future?

"Of all the sinful wasters of man's inheritance on earth," said the late Professor Shaler, "and all are in this regard sinners, the very worst are the people of America." This is not a popular phrase, but a scientific judgment. It is borne out by facts. In the movement of modern times, which has made the world commercially a small place and has produced a solidarity of the race such as never before existed, we have come to the point where we must to a certain extent regard the natural resources of this planet as a common asset, compare them with demands now made and likely to be made upon them, and study their judicious use. Commerce, wherever untrammeled, is wiping out boundaries and substituting the world relation of demand and supply for smaller systems of local economy. The changes of a single generation have brought the nations of the earth closer together than were the states of this Union at the close of the Civil War. If we fail to consider what we possess of wealth available for the uses of mankind, and to what extent we are wasting a national patrimony that can never be restored, we

might be likened to the directors of a company who never examine a balance sheet.

The sum of resources is simple and fixed. From the sea, the mine, the forest and the soil must be gathered everything that can sustain the life of man. Upon the wealth that these supply must be conditioned forever, as far as we can see, not only his progress but his continued existence on earth. How stands the inventory of property for our own people? The resources of the sea furnish less than five per cent of the food supply, and that is all. The forests of this country, the product of centuries of growth, are fast disappearing. The best estimates reckon our standing merchantable timber at less than 2,000,000,000,000 feet. Our annual cut is about 40,000,000,000 feet. The lumber cut rose from 18,000,000,000 feet in 1880 to 34,000,000,000 feet in 1905; that is, it nearly doubled in 25 years. We are now using annually 500 feet board measure of timber per capita, as against an average of 60 feet for all Europe. The New England supply is gone. The Northwest furnishes small growths that would have been rejected by the lumberman 30 years ago. The South has reached its maximum production and begins to decline. On the Pacific Coast only is there now any considerable body of merchantable standing timber. We are consuming yearly three or four times as much timber as forest growth restores. Our supply of some varieties will be practically exhausted

in 10 or 12 years; in the case of others, without reforesting, the present century will see the end. When will we take up in a practical and intelligent way the restoration of our forests?

Turning now to one of the only two remaining sources of wealth, the mine, we find it different from the others in an important essential. It is incapable of restoration or recuperation. The mineral wealth stored in the earth can be used only once. When iron and coal are taken from the mine, they cannot be restored; and upon iron and coal our industrial civilization is built. When fuel and iron become scarce and high-priced, civilization, as far as we can now foresee, will suffer as man would suffer by the gradual withdrawal of the air he breathes.

The exhaustion of our coal supply is not in the indefinite future. The startling feature of our coal production is not so much the magnitude of the annual output as its rate of growth. For the decade ending in 1905 the total product was 2,832,402,746 tons, which is almost exactly one-half the total product previously mined in this country. For the year 1906 the output was 414,000,000 tons, an increase of 46% on the average annual yield of the 10 years preceding. In 1907 our production reached 470,000,000 tons. Fifty years ago the annual per capita production was a little more than one-quarter of a ton. It is now about five tons. It is but eight years since we took the place of Great Britain as the

leading coal producing nation of the world, and already our product exceeds hers by over 43%, and is 37% of the known production of the world. Estimates of coal deposits still remaining must necessarily be somewhat vague, but they are approximately near the mark. The best authorities do not rate them at much over 2,000,000,000,000 tons. If coal production continues to increase as it has in the last 90 years, the available supply will be greatly reduced by the close of the century. Before that time arrives, however, resort to lower grades and sinking of mines to greater depths will become necessary; making the product inferior in quality and higher in price. Already Great Britain's industries have felt the check from a similar cause, as shown in her higher cost of production. Our turn will begin probably within a generation or two from this time. Yet we still think nothing of consuming this priceless resource with the greatest possible speed. Our methods of mining are often wasteful; and we not only prohibit our industries from having recourse to the coal supplies of other countries, but actually pride ourselves upon becoming exporters of a prime necessity of life and an essential of civilization.

The iron industry tells a similar story. The total of iron ore mined in the United States doubles about once in seven years. It was less than 12,000,000 tons in 1893, over 24,000,000 tons in 1899,

47,740,000 tons in 1906 and over 52,000,000 tons in 1907. The rising place of iron in the world's life is the most impressive phenomenon of the last century. In 1850 the pig iron production of the United States amounted to 563,757 tons, or about 50 pounds per capita. Our production now is over 600 pounds per capita. We do not work a mine, build a house, weave a fabric, prepare a meal or cultivate an acre of ground under modern methods without the aid of iron. We turn out over 25,000,000 tons of pig iron every year, and the production for the first half of 1907 was at the rate of 27,000,000 tons. This is two and one-half times the product of Great Britain. It is nearly half the product of the whole world. And the supply of this most precious of all the metals is so far from inexhaustible that it seems as if iron and coal might be united in their disappearance from common life.

The large deposits of iron ore in this country are now located. For cheap iron we depend upon the Lake Superior district, because of its high grade, the ease of extracting the ore from the mines and its nearness to cheap transportation. At the rate of over 50,000,000 tons per year, our present consumption, it would require over 2,000,000,000 tons to supply the demand for the next 40 years, supposing it to remain stationary. This would approach the end of all the higher grade ore in large deposits now in sight. The product of other workings would be of inferior

quality and higher cost and remote from market. But production is certain to increase even more rapidly than in the past. A few years ago a Swedish geologist prepared for his government a report which stated that the entire supply of the iron ore in the United States would be exhausted within the present century. The United States Geological Survey declared this an over-statement; but here is the conclusion of its own report, after a careful examination of the question in the light of the best authorities. I quote the official published document: "Assuming that the demand for iron ore during the present century may range from 50,000,000 to 100,000,000 tons per year, the Lake Superior district would last for from 25 to 50 years more, if it supplied the entire United States. But counting on the known reserves elsewhere in the United States the ore will last for a much longer period, though, of course, it must necessarily show a gradual but steady increase in value and in cost of mining, along with an equally steady decrease in grade." The most favorable view of the situation forces the conclusion that iron and coal will not be available for common use on anything like present terms before the end of this century; and our industrial, social and political life must be readjusted to meet the strains imposed by new conditions. Yet we forbid to our consumers access to the stores of other countries, while we boast of our increased exports, of that material for

want of which one day the nation must be reduced to the last extremity.

We now turn to the only remaining resource of man upon this earth, which is the soil itself. How are we caring for that, and what possibilities does it hold out to the people of future support? We are only beginning to feel the pressure upon the land. The whole interior of this continent, aggregating more than 500,000,000 acres, has been occupied by settlers within the last 50 years. What is there left for the next 50 years? Excluding arid and irrigable areas, the latter limited by nature, and barely enough of which could be made habitable in each year to furnish a farm for each immigrant family, the case stands as follows. In 1906 the total unappropriated public lands in the United States consisted of 792,000,000 acres. Of this area the divisions of Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico and Wyoming contained 195,700,000 acres of surveyed and 509,000,000 acres of unsurveyed land. Little of Alaska is fitted for general agriculture, while practically all of the rest is semi-arid land, available only for grazing or irrigation. We have, subtracting these totals, 50,000,000 acres of surveyed and 36,500,000 acres of unsurveyed land as our actual remaining stock. And 21,000,000 acres were disposed of in 1907. How long will the remainder last? No longer can we say that "Uncle Sam has land enough to give us all a farm."

Equally threatening is the change in quality. There are two ways in which the productive power of the earth is lessened; first by erosion and the sweeping away of the fertile surface into streams and thence to the sea, and second by exhaustion through wrong methods of cultivation. The former process has gone far. Thousands of acres in the East and South have been made unfit for tillage. North Carolina was, a century ago, one of the great agricultural states of the country and one of the wealthiest. Today as you ride through the South you see everywhere land gullied by torrential rains, red and yellow clay banks exposed where once were fertile fields; and agriculture reduced because its main support has been washed away. Millions of acres, in places to the extent of one-tenth of the entire erable area, have been so injured that no industry and no care can restore them.

Far more ruinous, because universal and continuing in its effects, is the process of soil exhaustion. It is creeping over the land from East to West. The abandoned farms that are now the playthings of the city's rich or the game preserves of patrons of sport, bear witness to the melancholy change. New Hampshire, Vermont, Northern New York, show long lists of them. In Western Massachusetts, which once supported a flourishing agriculture, farm properties are now for sale for half the cost of the improvements. Professor Carver, of Harvard, has declared

after a personal examination of the country that "agriculture as an independent industry, able in itself to support a community, does not exist in the hilly parts of New England."

The same process of deterioration is affecting the farm lands of Western New York, Ohio and Indiana. Where prices of farms should rise by increase of population, in many places they are falling. Between 1880 and 1900 the land values of Ohio shrank $60,000,000. Official investigation of two counties in Central New York disclosed a condition of agricultural decay. In one land was for sale for about the cost of improvements and 150 vacant houses were counted in a limited area. In the other the population in 1905 was nearly 4,000 less than in 1855.

Practically identical soil conditions exist in Maryland and Virginia, where lands sell at from $10 to $30 an acre. In a hearing before an Industrial Commission, the chief of the Bureau of Soils of the Department of Agriculture said: "One of the most important causes of deterioration, and I think I should put this first of all, is the method and system of agriculture that prevails throughout these states. Unquestionably the soil has been abused." The richest region of the West is no more exempt than New England or the South. The soil of the West is being reduced in agricultural potency by exactly the same processes which have driven the farmer of the East, with all his advantage of nearness to markets, from the field.

Within the last 40 years a great part of the richest land in the country has been brought under cultivation. We should, therefore, in the same time, have raised proportionately the yield of our principal crops per acre; because the yield of old lands, if properly treated, tends to increase rather than diminish. The year 1906 was one of large crops and can scarcely be taken as a standard. We produced, for example, more corn that year than had ever been grown in the United States in a single year before. But the average yield per acre was less than it was in 1872. We are barely keeping the acre product stationary. The average wheat crop of the country now ranges from 12½, in ordinary years, to 15 bushels per acre in the best seasons. And so it is on down the line.

But the fact of soil waste becomes startlingly evident when we examine the record of some states where single cropping and other agricultural abuses have been prevalent. Take the case of wheat, the mainstay of single-crop abuse. Many of us can remember when New York was the great wheat-producing state of the Union. The average yield of wheat per acre in New York for the last 10 years was about 18 bushels. For the first five years of that 10-year period it was 18.4 bushels, and for the last five 17.4 bushels. In the farther West, Kansas takes high rank as a wheat producer. Its average yield per acre for the last 10 years was 14.16 bushels. For

the first five of those years it was 15.14 and for the last five 13.18. Up in the Northwest, Minnesota wheat has made a name all over the world. Her average yield per acre for the same 10 years was 12.96 bushels. For the first five years it was 13.12 and for the last five 12.8. We perceive here the working of a uniform law, independent of location, soil or climate. It is the law of a diminishing return due to soil destruction. Apply this to the country at large, and it reduces agriculture to the condition of a bank whose depositors are steadily drawing out more money than they put in.

What is true in this instance is true of our agriculture as a whole. In no other important country in the world, with the exception of Russia, is the industry that must be the foundation of every state, at so low an ebb as in our own. According to the last census the average annual product per acre of the farms of the whole United States was worth $11.38. It is little more than a respectable rental in communities where the soil is properly cared for and made to give a reasonable return for cultivation. There were but two states in the Union whose total value of farm products was over $30 per acre of improved land. The great state of Illinois gave but $12.48, and Minnesota showed only $8.74. No discrimination attaches to these figures, where all are so much at fault. Nature has given to us the most valuable possession ever committed to man. It can

never be duplicated, because there is none like it upon the face of the earth. And we are racking and impoverishing it exactly as we are felling the forests and rifling the mines. Our soil, once the envy of every other country, the attraction which draws millions of immigrants across the seas, gave an average yield for the whole United States during the 10 years beginning with 1896 of 13.5 bushels of wheat per acre. Austria and Hungary each produced over 17 bushels per acre, France 19.8, Germany 27.6 and the United Kingdom 32.2 bushels per acre. For the same decade our average yield of oats was less than 30 bushels, while Germany produced 46 and Great Britain 42. For barley the figures are 25 against 33 and 34.6; for rye 15.4 against 24 for Germany and 26 for Ireland. In the United Kingdom, Belgium, The Netherlands and Denmark a yield of more than 30 bushels of wheat per acre has been the average for the past five years.

When the most fertile land in the world produces so much less than that of poorer quality elsewhere, and this low yield shows a tendency to steady decline, the situation becomes clear. We are robbing the soil, in an effort to get the largest cash returns from each acre of ground in the shortest possible time and with the least possible labor. This soil is not mere dead matter, subject to any sort of treatment with impunity. Chemically, it contains elements which must be present in certain proportions for the sup-

port of vegetation. Physically, it is made up of matter which supplies the principal plant food. This food, with its chemical constituents in proper admixture, is furnished by the decomposition of organic matter and the disintegration of mineral matter that proceed together. Whatever disturbs either factor of the process, whatever takes out of the soil an excessive amount of one or more of the chemical elements upon which plant growth depends, ends in sterility. Any agricultural methods that move in this direction mean soil impoverishment; present returns at the cost of future loss; the exhaustion of the land exactly as the animal system is enfeebled by lack of proper nourishment.

Our agricultural lands have been abused in two principal ways; first by single cropping, and second by neglecting fertilization. It is fortunate for us that nature is slow to anger, and that we may arrest the consequence of this ruinous policy before it is too late. In all parts of the United States, with only isolated exceptions, the system of tillage has been to select the crop which would bring in most money at the current market rate, to plant that year after year, and to move on to virgin fields as soon as the old farm rebelled by lowering the quality and quantity of its return. It is still the practice; although diversification of industry and the rotation of crops have been urged for nearly a century and are today taught in every agricultural college in this country. The demonstration of the evils of single cropping is mathe-

matical in its completeness. At the experiment station of the Agricultural College of the University of Minnesota they have maintained 44 experimental plots of ground, adjoining one another, and as nearly identical in soil, cultivation and care as scientific handling can make them. On these have been tried and compared different methods of crop rotation and fertilization, together with systems of single cropping. The results of ten years' experiment are now available. On a tract of good ground sown continuously for 10 years to wheat, the average yield per acre for the first five years was 20.22 bushels and for the next five 16.92 bushels. Where corn was grown continuously on one plot while on the plot beside it corn was planted but once in five years in a system of rotation, the average yield of the latter for the two years it was under corn was 48.2 bushels per acre. The plot where corn only was grown gave 20.8 bushels per acre for the first five and 11.1 bushels for the second of these years, an average of 16 bushels. The difference in average of these two plots was 32.2 bushels, or twice the total yield of the ground exhausted by the single crop system. The corn grown at the end of the 10 years was hardly hip high, the ears small and the grains light. But the cost of cultivation remained the same. And the same is true of every other grain or growth when raised continuously on land unfertilized. We frequently hear it said that the reduction in yield is due to the wearing out of the soil as if it was a gar-

ment to be destroyed by the wearing. The fact is that soils either increase or maintain their productivity indefinitely under proper cultivation. If the earth, the great mother of human and animal life, is to "wear out," what is to become of the race?

The two remedies are as well ascertained as is the evil. Rotation of crops and the use of fertilizers act as tonics upon the sail. We might expand our resources and add billions of dollars to our national wealth by conserving soil resources, instead of exhausting them as we have the forests and the contents of the mines. For there is good authority for the assertion that the farmer could take from the same area of ground in four years' 'grain crops out of a total of seven years as much as the whole seven now give him; leaving the products of the other three years when the land rested from grain as a clear profit due to better methods.

He can do far more than that by joining stock raising with grain raising. Nature has provided the cattle to go with the land. There is as much money in live stock as there is in grain. Looked at in any way there is money in live stock; money for dairy products, money for beef, money for the annual increase, and most money of all for the next year's crop when every particle of manure is saved and applied to the land.

We need not consider at present really intensive farming, such as is done by market gardeners with

high profit, or such culture as in France, in Holland, in Belgium and in the island of Jersey produces financial returns per acre that seem almost beyond belief. What our people have to do is to cover less ground, cultivate smaller farms so as to make the most of them, instead of getting a scant and uncertain yield from several hundred acres, and raise productively by intelligent treatment to twice or three times its present level.

There is more money in this system. The net profit from an acre of wheat on run-down soils is very small; consequently decreasing the acreage of wheat under certain conditions will not materially decrease profits. Here are some reliable estimates. The price of wheat is given from the United States Department of Agriculture Yearbook, average for ten years.

Yield.	Price.	Market value per acre.	Cost of production, including rent.	Net profit or loss.
20.....	$0.638	$12.76	$7.89	+ $4.87
16.....	.638	10.21	7.89	+ 2.32
12.....	.638	7.66	7.89	— .23
10.....	.638	6.38	7.89	— 1.51
8.....	.638	5.10	7.89	— 2.79

From the above table it will be seen that as large a net profit is realized from one crop of 20 bushels per acre as from two crops of 16 bushels; and that a 12 bushel crop or less yields a net loss. It is a safe

conclusion that 75 acres of land, growing a crop of clover every fourth year, will yield a larger net profit than will 100 acres sown to grain continually. A small field of eight acres of clover in the Red River Valley last year yielded 42 bushels, worth over $60, per acre, from the sale of seed.

I have dwelt upon the conservation of farm resources because of the commanding importance of this industry and because of its relation to our future. Nearly 36% of our people are engaged directly in agriculture. But all the rest depend upon it. In the last analysis, commerce, manufactures, our home market, every form of activity runs back to the bounty of the earth by which every worker, skilled and unskilled, must be fed and by which his wages are ultimately paid. The farm products of the United States in 1906 were valued at $6,794,000,000 and in 1907 at $7,412,000,000. All of our vast domestic commerce, equal in value to the foreign trade of all the nations combined, is supported and paid for by the land. Of our farm areas only one-half is improved. It does not produce one-half of what it could be made to yield; not by some complex system of intensive culture, but merely by ordinary care and industry intelligently applied. It is the capital upon which alone we can draw through all the future, but the amount of the draft that will be honored depends upon the care and intelligence given to its cultivation. Were any statesman to show us how to add

$7,000,000,000 annually to our foreign trade, it would be the sensation of the hour. The way to do this in agriculture is open. Our share in the increase would not be the percentage of profit allowed by successful trading, but the entire capital sum. On the other side stands the fact that the unappropriated area suited to farm purposes is almost gone, and that we have been for the last century reducing the producing power of the country. Nowhere in the range of national purposes is the reward for conservation of a national resource so ample. Nowhere is the penalty of neglect so threatening.

By the fixed rate of increase in the past, we must count upon a population of over 200,000,000 in the United States in the year 1950. The annual increase from natural growth is about one and one-half per cent each year. Adding for immigration only 750,000 a year, which is less than three-quarters of the figures reached in recent years, we shall have about 130,000,000 people in 1925 and at least 200,000,000 by the middle of the century. Where are they to go, how are they to be employed, how fed, how enabled to earn a living wage? The pressure of all the nations upon the waste places of the earth grows more intense as the last of them are occupied. We are approaching the point where all our wheat product will be needed for our own uses, and we shall cease to be an exporter of grain. There is still some room in Canada, but it will soon be filled. The

relief will be but temporary. Our own people, whose mineral resources will by that time have greatly diminished, must find themselves thrown back upon the soil for a living. If continued abuse of the land should mark the next 50 years as it has the last, what must be our outlook?

Even the unintelligent are now coming to understand that we cannot look to our foreign trade for relief from future embarrassment. Our total exports, about one-fourth in value of the products of our farms, consist to the extent of more than 70% of articles grown on the soil or directly sustained by it, such as live-stock, or made from soil products, such as flour. Of all the materials used in manufacture in this country, 42% are furnished by the soil. We shall have less and less of this agricultural wealth to part with as population increases. And as to enlarging greatly our sale of manufactured products in the world's markets, it is mostly a dream. We cannot finally compete there, except in a few selected lines, without a material lowering of the wage scale at home and a change in the national standard of living which our people are not ready to accept without a struggle. When capital cannot find a profit there will be no money for the payrolls of an unprofitable business. Doubtless as we grow we shall buy more and sell more; but our main dependence half a century ahead must be upon ourselves. The nation can no more escape the operation of that law

than can the man. It is time to set our house in order.

Not only the economic but the political future is involved. No people ever felt the want of work or the pinch of poverty for a long time without reaching out violent hands against their political institutions, believing that they might find in a change some relief from their distress. Although there have been moments of such restlessness in our country, the trial has never been so severe or so prolonged as to put us to the test. It is interesting that one of the ablest men in England during the last century, a historian of high merit, a statesman who saw active service and a profound student of men and things, put on record his prophecy of such a future ordeal. Writing to an American correspondent 50 years ago, Lord Macauley used these words: "As long as you have a boundless extent of fertile and unoccupied land your laboring population will be found more at ease than the laboring population of the Old World; but the time will come when wages will be as low and will fluctuate as much with you as they do with us. Then your institutions will be brought to the test. Distress everywhere makes the laborer mutinous and discontented and inclines him to listen with eagerness to agitators who tell him that it is a monstrous iniquity that one man should have a million and another cannot get a full meal. . . . The day will come when the multitudes of people,

none of whom has had more than half a breakfast or expects to have more than half a dinner, will choose a legislature. Is it possible to doubt what sort of legislature will be chosen? * * * There will be, I fear, spoliation. The spoliation will increase the distress; the distress will produce fresh spoliation. . . . Either civilization or liberty will perish. Either some Cæsar or Napoleon will seize the reins of government with a strong hand, or your republic will be as fearfully plundered and laid waste by barbarians in the twentieth century as the Roman Empire in the fifth." We need not accept this gloomy picture too literally, but we have been already sufficiently warned to prevent us from dismissing the subject as unworthy of attention. Every nation finds its hour of peril when there is no longer free access to the land, or when the land will no longer support the people. Disturbances within are more to be feared than attacks from without. Our government is built upon the assumption of a fairly Government is built upon the assumption of a fairly ruling their passions, with power to change their institutions when such change is generally desired. It would not be strange if they should in their desire for change attempt to pull down the pillars of their national temple. Far may this day be from us. But since the unnecessary destruction of our land will bring new conditions of danger, its conservation, its improvement to the highest point of

productivity promised by scientific intelligence and practical experiment, appears to be a first command of any political economy worthy of the name.

I have endeavored to outline some of the principal issues at stake in the better conservation of our national resources, and especially that one about which all the others revolve and by whose fortunes we shall eventually stand or fall—the land itself. They are for us quite literally the issues of national existence. The era of unlimited expansion on every side, of having but to reach out and seize any desired good, ready provided for us by the hand that laid the foundations of the earth, is drawing to a close. The first task, it seems to me, must be to force home the facts of the situation into the public consciousness; to make men realize their duty toward coming generations exactly as the father feels it a duty to see that his children do not suffer want. In a democracy this is a first essential. In other forms of government one or two great men may have power to correct mistakes and to put in motion wise policies that centuries do not unsettle. A part of the price of self-government is the acceptance of that high office and imperative duty as a whole by the people themselves. They must know, they must weigh, they must act. Only as they form and give effect to wise decisions can the nation go forward. And we should not be here today were it not that the principle of a conservation of national resources as the

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